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APPLICANTS John MacLean, Boston, MA ; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 12/02/2000					
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Verified and Acknowledged _____ Examiner's Signature _____ Initials _____		STATE OR COUNTRY MA	SHEETS DRAWING -	TOTAL CLAIMS -	INDEPENDENT CLAIMS -
ADDRESS Foley Hoag & Eliot LLP Patent Group One Post Office Square Boston ,MA 02109-2170					
TITLE Transaction management system					
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Exhibit I

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
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FEE RECORD SHEET

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(b)(2).

		Docket Number	TTZ-001.60		Type a plus sign (+) inside this box -	+
INVENTOR(S)/APPLICANT(S)						
LAST NAME	FIRST NAME	MIDDLE INITIAL	RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY)			
MacLean	John		Boston, MA 02109			
TITLE OF THE INVENTION (280 characters max)						
TRANSACTION MANAGEMENT SYSTEM						
CORRESPONDENCE ADDRESS						
Patent Group Foley, Hoag & Eliot LLP One Post Office Square						
STATE	MA	ZIP CODE	02109-2170	COUNTR Y	United States	
ENCLOSED APPLICATION PARTS (check all that apply)						
<input checked="" type="checkbox"/>	Specification	Number of Pages	9	<input type="checkbox"/>	Executed Small Entity Statement	
<input type="checkbox"/>	Drawing(s)	Number of Sheets		<input checked="" type="checkbox"/>	Other (specify) =	
				Certificate of Express Mail EL699587121US		
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)						
<input checked="" type="checkbox"/>	A check or money order is enclosed to cover the filing fees			FILING FEE AMOUNT (\$)		150.00
<input type="checkbox"/>	The Commissioner is hereby authorized to					

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.☐ Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE 

Date 09/28/00

TYPED or PRINTED NAME Robert A. Mazzarese

REGISTRATION NO.
(if appropriate)

42,852

БЕЛОРУССКАЯ

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Inventors: John MacLean

Attorney Docket: TTZ-001.60

TRANSACTION MANAGEMENT SYSTEM

Field of the Invention

The present invention relates to transaction management systems. More particularly, the invention relates to methods and systems for capturing and managing transactions, and electronic documents related thereto, conducted in a computer environment.

Background of the Invention

The emergence of networked computing, and in particular, increasingly accessible networks such as the Internet and the World Wide Web, has made possible a wide variety of computerized transactions and electronic commerce. This may include one-time consumer transactions such as a purchase of a product online, as well as business-to-business transactions, and complex consumer transactions such as mortgage lending, insurance, licensing, and so forth. When conducted using computers, transactions may involve data collection, presentation of multimedia such as text, graphics, and sound, dynamic data generation, exchange of other data types such as facsimiles, and so forth.

As a significant disadvantage, transactions involving significant exchanges of information in various formats may not be well documented, so that a party to a transaction may be unable to demonstrate a term or terms of the transaction that the party believed to be material.

There remains a need for a system that captures documents and electronic data associated with a transaction.

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Detailed Description of Certain Embodiments

A transaction management system may include a server, such as a Web server, that presents pages to client devices over a network. A user at a client device may enter data, navigate to different pages, and so forth. The server may include a software layer that can capture documents presented to the client device, and that can capture user input from the client device.

The software layer may reside, for example, between a presentation layer and any application logic layers within the server, so that any content presented to the client device may be captured. This may include static content or dynamic content, and may

include, for example, HTML, XML, media such as audio, video, animation, and graphics, as well as database query results however formatted, and so forth. Even where external content is included in a page, such as targeted advertisements, the actual advertisements presented within a page may be captured and stored within a transaction history. The software layer may also reside outside the server, either between the presentation layer and the network, or between a firewall and the network. It will be appreciated that, where secure communications are employed, the software layer may further include encryption and decryption processes as appropriate to maintain secure connections between components of the system.

The software layer may additionally capture user input from the client device. For example, activation of controls such as checkboxes, radio buttons, scroll boxes, drop-down lists and the like may be captured. Entries into text boxes and navigation through hyperlinks may be captured, as well as any files uploaded or downloaded by the client device.

The software layer may include one or more triggers to control activation and deactivation of transaction capture. For example, the software layer may be activated when a user navigates to a specific page, or activates a button within a page, or performs some other action. By controlling operation of the software layer with triggers, captured data and documents relating to a transaction may be stored without continuous logging of all server activity.

The software layer may capture data and store the data in a document repository.

The document repository may reside on a remote network device, accessible to the software layer and document viewers through an interface such as a Web server. The document viewer may use, for example, one or more API's to interpret various types of media for display or searching. Each document, item of data, or other media captured during a transaction may be time stamped so that the document viewer may be used to view a complete transaction including the order in which all items were viewed and user inputs provided. Each document may be interpreted and searched in its native format so that, for example, facsimiles may be searched and viewed by individual page, print streams may be searched for graphical or alphanumeric content, and so forth. The

In one method of doing business, an independent third party may provide a server for capturing transactions. The server may be accessed by any buyer or seller, for a fee, in order to capture a transaction. The server may, upon request, establish a connection with the seller and a connection with the buyer, and transfer network traffic between the two parties while capturing data in an internal software layer such as that described above. Should there be any dispute after the transaction is concluded, reference may be made to the captured documents, which will provide all details exchanged, and the order in which they were exchanged, prior to completion of the transaction. This may include information of relevance to buyers and sellers alike, including legally binding terms of an agreement, price, description of services and so forth. Data may also include volatile data

such as stock prices, interest rates, and auction bids, that may be relevant to a particular transaction.

It will be appreciated that transaction capture systems such as those described above will have broad application in networked environments. The system may provide insurance in simple retail transactions, such as on-line purchases using a credit card. The system may also provide a platform for complex transactions such as home mortgages, home purchases, loans, insurance policy issuance and underwriting, and so on. However, it should further be appreciated that the system may be used in non-networked environments. For example, a group of papers relating to a transaction may be scanned, faxed, or otherwise converted to an electronic form and stored in the document repository for subsequent retrieval and examination. In addition, a combination of paper documents and on-line documents may be stored in the document repository, so that a transaction that includes paper-based and electronic components may be captured by the system.

In another aspect, captured transactions may be reviewed using data mining techniques to investigate, for example, terms which caused potential buyers not to make a purchase, how long various pages of a multi-page transaction were viewed, exit points at which potential customers left a site, and so on. In such applications, the full content displayed to a client device may be retrieved and reviewed for investigation. Enhanced accuracy of data may be realized because users of the system will be motivated to provide accurate information during the course of a transaction. Further, paper-based and electronic documents may be collectively mined for information. In addition, structured search techniques may be applied to data of varying form, including, for example,

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1. A transaction management system including a server, a software layer within the server, and a data repository, the software layer configured to capture data provided by the server and data provided to the server by a remote client and to store the captured data in the data repository, the data repository storing the captured data for subsequent retrieval and review.

Abstract

The systems and methods described herein relate to a system for documenting electronic transactions. The system may store any documents or data associated with a transaction, including dynamic content and user selections and inputs. A document repository may be provided for storing unstructured data representing data, text, forms, and so forth presented to a party during a transaction. A viewer may be provided for displaying data stored in the document repository.

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